

National Climatic Data Center

DATA DOCUMENTATION

FOR

DATASET 6307 (DSI-6307)

CARDS Monthly Statistics

September 30, 2003

National Climatic Data Center
151 Patton Ave.
Asheville, NC 28801-5001 USA

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1. Abstract: CARDS Monthly Statistics is digital data set DS-6307, archived at the National Climatic Data Center (NCDC). This data set uses data from Comprehensive Aerological Data Set (CARDS) (DS-6305), also archived at NCDC. DS-6307 is similar in concept and format to Monthly Aerological Data Set (MONADS) (DS-6220), another digital data set archived at NCDC. DS-6305 and DS-6220 are monthly upper air statistics. DS-6307 data are for surface, tropopause, and mandatory pressure levels. At each level, monthly statistical parameters are provided for geopotential height or pressure, temperature, relative humidity, specific humidity, dew point temperature, wind speed, zonal wind speed, and meridional wind speed. Those statistical parameters are: mean value; standard deviation; minimum value; maximum value; first, second, and third quartile values, and number of non-missing observations used in the calculations. Data are global, from 1948 through the present day.

2. Element Names and Definitions: Block of Simple and Order Statistics. The CARDS Monthly Statistics archive format (block of simple statistics) consists of data records in ASCII format. There are two types of records:

1. Identification record (38 Bytes)
2. Level statistics data record (282 Bytes) - this record is repeated.

The identification record refers to all of the level statistics data records that follow the identification record until the next identification record is encountered.

Note!!! In calculating the standard deviation, the divisor N (not N-1) was used, where N is the number of non-missing observations.

Identification Record (38 Bytes)

BEGREC	1 Byte	Beginning of identification record (# symbol).
INDST	5 Bytes	Station number. INDST is the WMO number. INDST is a station number assigned according to TDF63 CARDS data format.
STN	1 Byte	Station Number Indicator. Specifies the type of station for which the statistics are calculated. The range of values is 0-9. The type station is identified in the TDF63 CARDS data format document.
STNNUM	8 Bytes	The number assigned to the station according to the numbering system specified in position STN. Within a month, STNNUM may differ from INDST, the values of STN and STNNUM are taken from the first observation where ELEV is non-missing.
YEAR	4 Bytes	Year of Observations.
MNTH	2 Bytes	Month of observations, two digit month (preceding zero appended when needed).
LAT	5 Bytes	Station latitude in hundredths of degrees, multiplied by 100, positive in the North Hemisphere, negative in the Southern Hemisphere (preceding zeroes appended when needed).
LONG	5 Bytes	Station longitude in hundredths of degrees, multiplied by 100, increasing in east direction (preceding zeroes appended when needed).

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ELEV	5 Bytes	Station elevation, height of the launch site in meters, negative if below mean sea level (preceding zeroes appended when needed).
STTIME	2 Bytes	Standard launch time for which statistics are calculated.

Possible values are: 03 UTC and 15 UTC for the period January 1948 to June 1957 and 00 UTC and 12 UTC from July 1957 to the present. For the period beginning July 1957, observations which differ from 00 UTC or 12 UTC by not more than 3 hours, are used in the calculations for STTIME=00 or 12 UTC.

Level Statistics Data Record (282 Bytes, repeats for mandatory levels)

STLT	2 Bytes	Statistics level type. May have the following values (see DSI-6300 data format document): 32 - Statistics for mandatory pressure levels. Are calculated from observational data with the following values of Level Types: 32, 81, 82, 83, 86, 87, 88, 89 31 - Statistics for the surface level. Calculated from observational data with the following level types: 31, 83 26 - Statistics for tropopause levels. Calculated from observational data with the following level types: 26, 81, 89, 90
PRES	5 Bytes	Pressure for the level (in tenths of millibars, multiplied by 10). Has the following values: If STLT=32 - mandatory pressure level pressure value If STLT=26 or STLT=31 - mean monthly value of pressure calculated for the station for this level (surface or tropopause)

Block of Statistics for Geopotential Height

If STLT=32 - geopotential height statistics at mandatory pressure levels
If STLT=26 or STLT=31 - pressure statistics for tropopause and surface STLT=32

MHGT	5 Bytes	Mean value of height in geopotential meters, negative if below mean sea level, equal to -9999 if missing (preceding zeroes appended when needed).
SHGT	5 Bytes	Standard deviation height in geopotential meters, equal to -9999 if missing (preceding zeroes appended when needed).
MIHGT	5 Bytes	Minimum height in geopotential meters, negative if below mean sea level, equal to -9999 if missing (preceding zeroes appended when needed).
MAHGT	5 Bytes	Maximum height in geopotential meters, negative if below mean sea level, equal to -9999 if missing (preceding zeroes appended when needed).
MDHGT	5 Bytes	Median (second quartile) value of height, in geopotential meters, negative if below mean sea level, equal to -9999 if missing (preceding zeroes appended when needed).
Q1HGT	5 Bytes	First quartile (25 percentile) value of height, in
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		Geopotential meters, negative if below mean sea level, equal to -9999 if missing (preceding zeroes appended when needed).
Q3HGT	5 Bytes	Third quartile (75 percentile) value of height, in geopotential meters, negative if below mean sea level, equal to -9999 if missing (preceding zeroes appended when needed).
NHGT	2 Bytes	Number of non-missing observations used in the calculation of height statistics.

The following record for pressure statistics will appear instead of statistics for height if STLT=26 or STLT=31

MPRS	5 Bytes	Mean value of pressure in tenths of millibars, multiplied by 10, equal to -9999 if missing (preceding zeroes appended when needed).
SPRS	5 Bytes	Standard deviation of pressure in tenths of millibars, multiplied by 10, equal to -9999 if missing (preceding zeroes appended when needed).
MIPRS	5 Bytes	Minimum pressure in tenths of millibars, multiplied by 10, equal to -9999 if missing (preceding zeroes appended when needed).
MAPRS	5 Bytes	Maximum pressure in tenths of millibars, multiplied by 10, equal to -9999 if missing (preceding zeroes appended when needed).
MDPRS	5 Bytes	Median (second quartile) value of pressure, in tenths of millibars, multiplied by 10, equal to -9999 if missing (preceding zeroes appended when needed).
Q1PRS	5 Bytes	First quartile (25 percentile) value of pressure, in tenths of millibars, multiplied by 10, equal to -9999 if missing (preceding zeroes appended when needed).
Q3PRS	5 Bytes	Third quartile (75 percentile) value of pressure, in tenths of millibars, multiplied by 10, equal to -9999 if missing (preceding zeroes appended when needed).
NPRS	2 Bytes	Number of non-missing level observations used in the calculation of pressure statistics

Block of Statistics for Temperature

MTEMP	4 Bytes	Mean value of temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
STEMP	3 Bytes	Standard deviation value of temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 999 if missing (preceding zeroes appended when needed).
MITEMP	4 Bytes	Minimum value of temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MATEMP	4 Bytes	Maximum value of temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MDTEMP	4 Bytes	Median (second quartile) value of temperature in degrees and tenths of degree Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
Q1TEMP	4 Bytes	First quartile (25 percentile) value of temperature in degrees and tenths of degree Celsius, multiplied by 10,

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		equal to 9999 if missing (preceding zeroes appended when needed).
Q3TEMP	4 Bytes	Third quartile (75 percentile) value of temperature in degrees and tenths of degree Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
NTEMP	2 Bytes	Number of non-missing observations used in the calculation of temperature statistics.

Block of Statistics for Relative Humidity

MRHUM	4 Bytes	Mean value of relative humidity in whole and hundredths of percents, multiplied by 100, equal to 9999 if missing (preceding zeroes appended when needed).
SRHUM	3 Bytes	Standard deviation value of relative humidity in whole and hundredths of percents, multiplied by 100, equal to 999 if missing (preceding zeroes appended when needed).
MIRHUM	4 Bytes	Minimum value of relative humidity in whole and hundredths of percents, multiplied by 100, equal to 9999 if missing (preceding zeroes appended when needed).
MARHUM	4 Bytes	Maximum value of relative humidity, in whole and hundredths of percents, multiplied by 100, equal to 9999 if missing (preceding zeroes appended when needed).
MDRHUM	4 Bytes	Median (second quartile) value of relative humidity in whole and hundredths of percents, multiplied by 100, equal to 9999 if missing (preceding zeroes appended when needed).
Q1RHUM	4 Bytes	First quartile (25 percentile) value of relative humidity in whole and hundredths of percents, multiplied by 100, equal to 9999 if missing (preceding zeroes appended when needed).
Q3RHUM	4 Bytes	Third quartile (75 percentile) value of relative humidity in whole and hundredths of percents, multiplied by 100, equal to 9999 if missing (preceding zeroes appended when needed).
NRHUM	2 Bytes	Number of non-missing observations used in the calculation of relative humidity statistics.

Block of Statistics for Specific Humidity

MSPHUM	6 Bytes	Mean value of specific humidity in thousandths of gram per kilogram, multiplied by 1000, equal to 999999 if missing (preceding zeroes appended when needed).
SSPHUM	5 Bytes	Standard deviation value of specific humidity in thousandths of a gram per kilogram, multiplied by 1000, equal to 99999 if missing (preceding zeroes appended when needed).
MISPHUM	6 Bytes	Minimum value of specific humidity in thousandths of a gram per kilogram, multiplied by 1000, equal to 999999 if missing preceding zeroes appended when needed).
MASPHUM	6 Bytes	Maximum value of specific humidity in thousandths of gram per kilogram, multiplied by 1000, equal to 999999 if missing (preceding zeroes appended when needed).
MDSPHUM	6 Bytes	Median (second quartile) value of specific humidity in Thousandths of a gram per kilogram, multiplied by 1000, equal to 999999 if missing (preceding zeroes appended when needed).

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Q1SPHUM	6 Bytes	First quartile (25 percentile) value of specific humidity in thousandths of a gram per kilogram, multiplied by 1000, equal to 999999 if missing (preceding zeroes appended when needed).
Q3SPHUM	6 Bytes	Third quartile (75 percentile) value of specific humidity in thousandths of a gram per kilogram, multiplied by 1000, equal to 999999 if missing (preceding zeroes appended when needed).
NSPHUM	2 Bytes	Number of non-missing observations used in the calculation of specific humidity statistics.

Block of Statistics for Dewpoint Temperature

MDPTEMP	5 Bytes	Mean value of dewpoint temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
SDPTEMP	3 Bytes	Standard deviation of dewpoint temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 999 if missing (preceding zeroes appended when needed).
MIDPTEMP	5 Bytes	Minimum value of dewpoint temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MADPTEMP	5 Bytes	Maximum value of dewpoint temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MDDPTEMP	5 Bytes	Median (second quartile) value of dewpoint temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
Q1DPTEMP	5 Bytes	First quartile (25 percentile) value of dewpoint temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
Q3DPTEMP	5 Bytes	Third quartile (75 percentile) of dewpoint temperature in degrees and tenths of degrees Celsius, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
NDPTEMP	2 Bytes	Number of non-missing observations used in the calculation of dewpoint temperature statistics.

Block of Statistics for Wind Speed

MWSPD	4 Bytes	Mean value of wind speed in tenths of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
SWSPD	4 Bytes	Standard deviation of wind speed in tenths of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MIWSPD	4 Bytes	Minimum value of wind speed in tenths of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MAWSPD	4 Bytes	Maximum value of wind speed in tenth of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MDWSPD	4 Bytes	Median (second quartile) value of wind speed in tenths of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).

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Q1WSPD	4 Bytes	First quartile (25 percentile) value of wind speed in tenths of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
Q3WSPD	4 Bytes	Third quartile (75 percentile) value of wind speed in tenths of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
NWSPD	2 Bytes	Number of non-missing observations used in the calculation of zonal wind speed statistics.
MUWIND	5 Bytes	Mean value of zonal wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
SUWIND	4 Bytes	Standard deviation value of the zonal wind in tenths of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MIUWIND	5 Bytes	Minimum value of zonal wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
MAUWIND	5 Bytes	Maximum value of the zonal wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
MDUWIND	5 Bytes	Median (second quartile) value of the zonal wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
Q1UWIND	5 Bytes	First quartile (25 percentile) value of the zonal wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
Q3UWIND	5 Bytes	Third quartile (75 percentile) value of the zonal wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
NUWIND	2 Bytes	Number of non-missing observations used in the calculation of statistics for the zonal and meridional wind.
MVWIND	5 Bytes	Mean value of meridional wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
SVWIND	4 Bytes	Standard deviation of the meridional wind in tenths of meters per second, multiplied by 10, equal to 9999 if missing (preceding zeroes appended when needed).
MIVWIND	5 Bytes	Minimum value of the meridional wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
MAVWIND	5 Bytes	Maximum value of the meridional wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
MDVWIND	5 Bytes	Median (second quartile) value of the meridional wind, in if missing (preceding zeroes appended when needed).
Q1VWIND	5 Bytes	First quartile (25 percentile) value of the meridional wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
Q3VWIND	5 Bytes	Third quartile (75 percentile) value of the meridional wind in tenths of meters per second, multiplied by 10, equal to 99999 if missing (preceding zeroes appended when needed).
NVWIND	2 Bytes	Number of non-missing observations used in the calculation of meridional wind statistics.

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3. **Start Date:** 19480101
4. **Stop Date:** Ongoing
5. **Coverage:**
 - a. Southernmost Latitude: -90.0S
 - b. Northernmost Latitude: 90.0N
 - c. Westernmost Longitude: -180.0W
 - d. Easternmost Longitude: 180.0E
6. **How to Order Data:**

Ask NCDC's Climate Services about the cost of obtaining this data set.
Phone: 828-271-4800
FAX: 828-271-4876
E-mail: NCDC.Orders@noaa.gov
7. **Archiving Data Center:**

Archive Branch
National Climatic Data Center
151 Patton Avenue
Asheville, NC 28801
8. **Technical Contact:**

National Climatic Data Center
151 Patton Avenue
Asheville, NC 28801
9. **Known Uncorrected Problems:** None.
10. **Quality Statement:**
11. **Essential Companion Datasets:**
12. **References:**

Filename: new6307.txt
Directory: Z:\onlinedocs\newformat
Template: C:\Documents and Settings\chris.fenimore\Application
Data\Microsoft\Templates\Normal.dot
Title: ABRIDGED
Subject:
Author: David P. Smith
Keywords:
Comments:
Creation Date: 10/10/2003 3:04 PM
Change Number: 2
Last Saved On: 10/10/2003 3:04 PM
Last Saved By: chris.fenimore
Total Editing Time: 1 Minute
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As of Last Complete Printing
Number of Pages: 9
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Number of Characters: 19,745 (approx.)